

WHAT IS CLAIMED IS:

1. A cancellation server for canceling cryptographic puzzles, the puzzles associated with identifiers, for use in a digital delivery system comprising an intended recipient of a digital object including a cryptographic puzzle, the cancellation server in connection with at least one database, and executing the steps of:
 - receiving the identifier associated with the recipient's puzzle;
 - querying the at least one database with the identifier; and
 - canceling the intended recipient's puzzle if the query fails, by causing an entry to be stored in the at least one database,wherein the entry comprises the identifier or information derived from the identifier.
2. The cancellation server of claim 1 further executing the step of transmitting an ACCEPT response if the query fails.
3. The cancellation server of claim 1 further executing the step of transmitting a REJECT response if the query succeeds.
4. The cancellation server of claim 1 wherein the puzzles are further associated with timestamps, the server further executing the step of receiving the timestamp associated with the recipient's puzzle, and wherein the entry to be stored in the at least one database if the query fails further comprises the timestamp or information derived from the timestamp.
5. The cancellation server of claim 4 further executing the step of causing an entry to be removed from the database if its timestamp falls outside a threshold range.
6. The cancellation server of claim 1 wherein querying the at least one database comprises computing a hash of the identifier.
7. The cancellation server of claim 6 further corresponding to a range of values for a peer-to-peer distributed lookup service, and the identifier is hashed to a value within the range.
8. The cancellation server of claim 1 in connection with a second cancellation server for providing data in the at least one database to the second cancellation server.

9. The cancellation server of claim 1 in connection with a second cancellation server for querying at least one database associated with the second cancellation server.
10. The cancellation server of claim 9 wherein the cancellation server and the second cancellation server communicate through a peer-to-peer network.
11. The cancellation server of claim 1 wherein the digital object is an electronic mail message.
12. A puzzle checker for verifying solutions to cryptographic puzzles, the puzzles associated with identifiers and timestamps, for use in a digital delivery system comprising an intended recipient of a digital object including a cryptographic puzzle and solution, the puzzle checker in connection with at least one cancellation server, and executing the steps of:
 - transmitting the identifier associated with the puzzle to the at least one cancellation server; and
 - processing the digital object if a REJECT response is received from the at least one cancellation server.
13. The puzzle checker of claim 12 wherein processing the digital object comprises removing the digital object.
14. The puzzle checker of claim 12 wherein processing the digital object comprises marking the digital object for subsequent filtering.
15. The puzzle checker of claim 12 wherein processing the digital object comprises modifying the priority of the digital object.
16. The puzzle checker of claim 12 further executing the steps of:
 - verifying whether the solution solves the puzzle; and
 - processing the digital object if the solution does not solve the puzzle.
17. The puzzle checker of claim 12 further executing the steps of:
 - confirming whether the timestamp is within a threshold range; and
 - processing the digital object if the timestamp is outside the threshold range.

18. The puzzle checker of claim 12 further executing the step of:
 computing a hash of the identifier;
wherein the transmitting step further comprises transmitting the identifier to the at least one cancellation server corresponding to the hash of the identifier.
19. The puzzle checker of claim 12 wherein the puzzle checker resides at the intended recipient.
20. The puzzle checker of claim 12 wherein the puzzle checker resides at an intermediary server.
21. The puzzle checker of claim 20 wherein the intermediary server transmits the object for delivery to the intended recipient only if a REJECT response is not received from the at least one cancellation server.
22. A puzzle creator for generating and solving cryptographic puzzles for use in a digital delivery system comprising a puzzle checker in connection with at least one cancellation server and an intended recipient of a digital object including a cryptographic puzzle and solution, the puzzle creator executing the steps of:
 generating an identifier;
 generating a timestamp;
 generating a cryptographic puzzle using the identifier and timestamp; and
 computing a solution to the cryptographic puzzle;
whereby the puzzle, solution, timestamp and identifier are attached to the digital object for delivery to the intended recipient.
23. The puzzle creator of claim 22 wherein the identifier comprises a string of random bits.
24. The puzzle creator of claim 22 wherein the identifier comprises a string of at least 128 bits.
25. The puzzle creator of claim 22 wherein computing a solution to the cryptographic puzzle requires more than about seven seconds of computational time.
26. The puzzle creator of claim 22 further executing the steps of:

receiving a request from the sender of the digital object;
transmitting the identifier, timestamp, puzzle and solution to the sender.

27. The puzzle creator of claim 26 further executing the step of:
receiving payment from the sender of the digital object.

28. A method for canceling cryptographic puzzles, the puzzles associated with identifiers, for use in a digital delivery system comprising at least one database in connection with a first cancellation server and an intended recipient of a digital object including a cryptographic puzzle, the method comprising the steps of:

receiving the identifier associated with the recipient's puzzle;
querying the at least one database with the identifier; and
canceling the intended recipient's puzzle if the query fails, by causing an entry to be

stored in the at least one database,
wherein the entry comprises the identifier or information derived from the identifier.

29. The method of claim 28 wherein the puzzles are further associated with timestamps, the method further comprising the step of receiving the timestamp associated with the recipient's puzzle, and wherein the entry to be stored in the at least one database if the query fails further comprises the timestamp or information derived from the timestamp.

30. The method of claim 29 further comprising the step of causing an entry to be removed from the database if its timestamp falls outside a threshold range.

31. The method of claim 28 further comprising the step of providing data in the at least one database to a second cancellation server.

32. The method of claim 28 further comprising the step of querying an at least one database associated with a second cancellation server.

33. The method of claim 32 wherein the first cancellation server and the second cancellation server communicate through a peer-to-peer network.

34. The method of claim 28 wherein the first cancellation server corresponds to a range of values for a distributed hash table, and the identifier is hashed to a value within the range.

35. The method of claim 28 wherein the digital object is an electronic mail message.

36. A computer-readable medium including computer-executable instructions facilitating the cancellation of cryptographic puzzles, the puzzles associated with identifiers, for use in a digital delivery system comprising at least one database in connection with a first cancellation server and an intended recipient of a digital object including a cryptographic puzzle, said computer-executable instructions executing the steps of:

- receiving the identifier associated with the recipient's puzzle;

- querying the at least one database with the identifier; and

- canceling the intended recipient's puzzle if the query fails, by causing an entry to be stored in the at least one database,

wherein the entry comprises the identifier or information derived from the identifier.